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The Effects of Mindfulness Meditation and Mind-Wandering on Coping-Related Hopefulness in Undergraduate College Students

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by

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Abstract

High levels of stress in college students are extremely prevalent. This is evident in time-consuming academic responsibilities overlapping with family life, work duties, and personal life. Stress can have negative impacts on academic performance and physical health in college students , and it has been correlated with various negative outcomes including anxiety and depression (Segrin,1999), increases in headaches (Labbe, Murphy & O'Brien, 1997), increased rates of athletic injury (Brewer & Petrie, 1996), suicidal ideation and hopelessness (Dixon, Rumford, Heppner, & Lipps, 1992), sleep disturbances (Verlander, Benedict, & Hanson, 1999), poor health behaviors (Sadava & Pak, 1993; Naquin & Gilbert, 1996), and the common cold (Stone, Bovbjerg, Neale, et al.). The focus of the current study was to investigate mindfulness as a way to help college students to cope with on-going stress specifically through its impact on increasing hope related to coping with a current life stressor. Mindfulness is an openness to perceiving one's present environment in a non- judgmental way with openness and flexibility (Compton & Hoffman, 2013; Bergen-Cico, Possemato, & Cheon, 2013). It allows one to be more fully aware of present moment situations, open to new outlooks and points of view, and it facilitates more knowledge and pathways to goal attainment (Compton & Hoffman, 2013). For the current study, it was hypothesized that a brief mindfulness meditation intervention would increase coping-related hopefulness in a group of college students compared to a mind-wandering intervention. Forty-two undergraduate college students from the University of Southern Mississippi completed measures of stress and hope and identified a current stressor in their life to focus on when responding to the hope

scale. The mean differences in hope change across the mindfulness and mind-wandering groups were computed, and the results indicated the average hope increase for the mindfulness meditation group was not statistically significant from the average hope increase for the mind-wandering group. The participants were further divided into a high stress group (above the mean) and a low stress group (below the mean). Within the low stress group, the average hope increase for the mindfulness group was 2.08 (SD=4.01), and the average hope increase for the mind-wandering group was 2.0 (SD=3.42). Within the high stress group, the average hope increase for the mindfulness group was 3.7 (SD=3.37), and the average hope increase for the mind-wandering group was 2.4 (SD=3.63). The t-test indicated that the results were not statistically significant. However, the high stress group showed a greater increase in hope in the mindfulness group. Although not statistically significant, the results suggest a possible trend for increases in positive cognitions related to coping with stress in the mindfulness meditation group relative to the mind-wandering group, for the participants reporting higher than average numbers of life stressors. Future research should consider testing the same procedure with a larger sample of high-stress individuals in order to increase statistical power.

Keywords: Mindfulness, Meditation, Stress, Hope

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Chapter I: Introduction

It is no secret that college students are susceptible to high levels of stress due to academic responsibilities overlapping with personal life, family life, and work duties. A substantial, increasing percentage of college students admit experiencing negative effects on their academic and social functioning due to high levels of emotional distress and anxiety (Bergen-Cico & Cheon, 2013; Oman, Shapiro, Thoresen, Plante, & Flinders, 2008; Roberts & Danoff-Burg, 2010). According to 1/3 (32%) of roughly 50,000 students surveyed at 74 United States campuses in 2004, stress was the most reported cause of poor academic performance (American College Health Association, 2006). Clearly stress has negative effects on academic performance, but it also has negative effects on physical health. High levels of stress in college students have been correlated with negative psychological outcomes such as anxiety and depression (Segrin,1999), increases in headaches (Labbe, Murphy & O'Brien, 1997), increased rates of athletic injury (Brewer & Petrie, 1996), suicidal ideation and hopelessness (Dixon, Rumford, Heppner, & Lipps, 1992), sleep disturbances (Verlander, Benedict, & Hanson, 1999), poor health behaviors (Sadava & Pak, 1993; Naquin & Gilbert, 1996), and the common cold (Stone, Bovbjerg, Neale, et al.). Research also shows that severe stress can have negative effects on a person's hopefulness (Lopez, Snyder, & Pedrotti, 2003), and willingness to forgive (Harris & Thoresen, 2005).

An important question to consider is how college students cope with these on-going stressors that affect them so negatively. Traditionally, the field of psychology focused more on negative emotions, but the field of positive psychology emphasizes the importance of positive emotions, more specifically research on "human strengths and

virtues" (Seligman,1998). Experiencing positive emotions is not just about the absence of pathology, but also about experiencing concepts like self-actualization (Maslow, 1970,1971), individuation (Jung, 1935), and being "weller than well" (Menniger, 1963). These states of optimal well-being allow a person to reach their own full potential and find meaning and purpose in their lives instead of just simply existing (Arnau, 2002).

Hope as a Positive Emotion

Hope is defined by Lazarus (1991) as the feeling of yearning for an outcome that the odds do not favor. It is an emotional fuel that motivates individuals in sustaining efforts to manage and act in pursuit of their goal (Lazarus, 1991). Hope is seen as a positive emotion related to coping and goal-oriented action (Prestin, 2013). According to Peterson (2002), hope is a unique positive quality that can promote and maintain action toward health, happiness, achievement, and perseverance. Positive emotions, such as hope, allow people to appraise a situation and then take appropriate action towards pursuing an important goal.

Emotions are related to urges to act certain ways and display certain behaviors. These urges have been called *specific action tendencies* (Frijda, 1986; Frijda, Kuipers, & Schure, 1989; Lazarus, 1991; Levenson, 1994; Tooby & Cosmides, 1990). According to Barbara Fredrickson, positive emotions do not necessarily have to elicit action tendencies or physical action, but can be associated with *thought action tendencies* instead (Fredrickson, 1998). For example, when one experiences a positive emotion such as when enjoying a favorite hobby, one does not necessarily feel the urge for physical action. Instead, one would most likely experience thoughts and feelings of happiness or joy while engaging in the hobby. Interestingly, experiencing positive emotions could also

broaden a person's thought-action response and allow for more creativity, exploration, and unpredictable paths compared to negative emotions. Positive emotions also broaden the scope of attention, cognition, and action, and build physical, intellectual, and social resources (Fredrickson, 1998).

In a series of studies conducted by Alice Isen (1987), cognitive benefits associated with positive affect were found. It was suggested that positive affect led to creative thinking and a greater understanding and grasp of abstract concepts and ideas related to facilitating memory. These studies demonstrated that memory is a key aspect of college student's academic performance. Scientific studies related to building intellectual resources have concluded that having students recall a happy memory in their lives before learning new information or taking a test facilitated learning and resulted in significant intellectual performance (Fredrickson, 1998).

Now we know and understand how positive emotions such as hope can be beneficial to college students. Obviously, college students deal with constant daily stressors that cause them to experience negative emotions. Another important idea to consider is that positive emotions could have an effect on negative emotions. In a study conducted by Fredrickson & Levenson (1998), participants were first shown a film that elicited negative arousal. They were then separated into two positive emotion groups where a short film was shown to elicit either contentment or amusement. The negative emotion group was shown a short film to elicited sadness, and the control group was shown visual abstract display believed to elicit no emotion. The results indicated that the two positive emotion groups exhibited faster recovery in cardiovascular activation from the initial negative emotional arousal film than the negative emotion group. This study

represents the undoing effect of negative emotions (Fredrickson, 1998), and supports the idea that although negative emotions are a factor in college students' lives, experiencing positive emotions like hope can buffer the effects of negative emotions and make them more manageable.

Evidence also suggests that the future focus of hope could cause people to display more self- control (Winterich & Haws, 2011), which is an important quality for college students to exercise. In addition, "higher-hope people use humor to cope with the nuisances and blemishes of life" (Snyder, 1994). This statement suggests that humor can be used as a coping mechanism for stress and can even foster hope in individuals (Vilaythong et al., 2003). Therefore, it could be said that positive emotions like hope and humor could play a role in coping with negative emotions such as stress.

Hope: Agency and Pathways

Past research results have shown that hope plays an important role in coping effectively. Two key aspects relevant to coping-related hopefulness are agency and pathways. Agency refers to a person's cognitive ability to realize potential actions toward goal attainment (Snyder, 1994). It also includes the belief that one can display persistent determination in achieving these goals (Snyder, et. al., 1991). Pathways refer to a person's generation of successful ideas or plans that they feel will help them reach their goal (Snyder, et. al., 1991). In other words, hope is a cognitive ability based on one's sense of successful agency (i.e., belief one can achieve a goal) and pathways (i.e. a plan to meet goals) (Snyder et al., 1991). The results of a study conducted by Snyder et al. (1991) found that participants high in hope reported more pathways for achieving goals than medium-hope and low-hope participants. A similar study conducted by Snyder, et al.

(1991) examined the relationship between hope and agency and pathways in the presence of academic stressors. The results revealed that agency and pathways were maintained in high-hope individuals. Medium-hope individuals had less agency but maintained some pathways, and low-hope individuals had both decreased agency and pathways (Snyder et al., 1991).

Results of other scientific research conducted by Snyder et al. (1991), revealed that high-hope people tend to pursue more difficult goals. Interestingly, other research shows that high hope people typically reach these more challenging goals. One study conducted by Anderson (1988) studied a group of psychology students who took the Snyder State Hope Scale. Three weeks later, students were told to set a realistic final grade goal for their class before they took any exams in that class (Anderson, 1988). Hope scores were positively correlated with grade expectancy showing that students higher in hope set higher grade goals (Anderson, 1988). Therefore, higher hope appears to be related to academic achievement (Snyder et al., 1991).Vaughn, Aldridge, and Villodas (2010), conducted a study to examine how hope related to coping use in a group of adolescent high school students. Students were asked to record a significant stressor that had currently effected them within the last day. Next, the students rated their perceived coping strategy related to the stressful event out of eight different coping strategies including planning, positive thinking, direct problem solving, humor, acceptance, distracting actions, and religious coping. Descriptive statistics showed that of the stressful events, 48% were academic, 23 % related to social relationships, 6% related to health, 4% related to time constraints, and 2% were related to family issues (Vaughn, Aldridge, & Villodas, 2010). The study also found that students' hope-agency was

positively correlated with direct problem solving, positive thinking, and more support for actions. Hope-pathways were significantly and positively correlated with religious coping, distracting actions, direct problem solving, and positive thinking, and overall coping use (Vaughn, Aldridge, & Villodas, 2010). Therefore, it is evident that people with high hope pathways use a variety of different coping strategies. People high in hope have consistent agency and pathways, view goals as more challenging (as opposed to difficult), choose more challenging goals, and usually meet those final goals (Snyder et al., 1991). In conclusion, people high in hope are more confident, more optimistic about their well-being in the future, and are better able to cope with stressors sufficiently compared to people low in coping-related hopefulness. High hope people also have more social support, and despite obstacles, tend to utilize and maintain efficient agency and pathways in achieving their goals (Rand & Cheavens, 2009).

Mindfulness

Research supports hope as a positive emotion and how its benefits contribute to future goal setting and achievement. An important question to consider is how hope can be facilitated in a person. Mindfulness is an openness to perceiving one's present environment in a non- judgmental way with openness and flexibility (Compton & Hoffman, 2013; Bergen-Cico, Possemato, & Cheon, 2013). It allows one to be more fully aware of present moment situations, open to new outlooks and points of view, and it facilitates more knowledge and pathways to goal attainment (Compton & Hoffman, 2013). There are cognitive benefits of mindfulness like the ability to avoid unhealthy coping strategies by more accurately perceiving stressful events (Bergen-Cico, Possemato, & Cheon, 2013). Mindfulness also encompasses more self-awareness and

conscious observation of internal and external experiences (Bergen-Cico, Possemato, & Cheon, 2013).

In a study conducted by Ellen Langer and her colleague Judith Rodin (1976), mindfulness is investigated in terms of a cognitive style that focuses on awareness and attention to everyday experiences. The study assessed sense of control in nursing home patients. Some residents were given a small house plant to care for and a moderate influence in everyday life decision making; others were not (Langer & Rodin, 1976). The results indicated that one year-and-a-half later, residents that had more control in their daily lives displayed more cheerfulness, alertness, and were more active than other residents (Langer & Rodin, 1976). Langer suggested that these patients had more positive outcomes because they paid more attention to their environment when monitoring plants and were more mindful of experiences (Langer & Rodin, 1976). Others studies of Langer's form of mindfulness that seem to be relevant to college students include: enhanced classroom learning (Ritchart & Perkins, 2002), and reduced negative effects on creativity of social comparison (Langer, Pirson, & Delizonna, 2010).

Buddhist tradition encompasses mindfulness meditation and focused awareness on attention to experience without attachment to one's experiences (Compton & Hoffman, 2013). Mindfulness meditation techniques are used in mindfulness-based stress reduction programs (MBSR) which are currently one of the most widely researched mindfulness interventions. Research shows that long-term MBSR can enhance well-being and reduce psychological distress in clinical and non-clinical populations, like college students (Carmody & Baer, 2009; Hofmann, Sawyer, Witt, & Oh, 2010; Shapiro, Schwartz, & Bonner, 1998; Segal, Williams, & Teasdale, 2002; Chatzisarantis & Hagger,

2007; Bohlmeijer, Prenger, Taal, & Cuijpers, 2010; Kabat-Zinn, 2009; Baer, Carmody, & Hunsinger, 2012). Unfortunately, the full length MBSR program is not ideal for college students because of their hectic schedules. However, there is evidence that short-term mindfulness training and techniques have positive benefits specifically related to coping with stress.

A study conducted by Bergen-Cico, Possemato, & Cheon (2013) investigated the hypothesis that a brief mindfulness meditation program would produce positive results in self-compassion, mindfulness skills, and trait anxiety among a group of non-clinical college students. Another focus was to study the effects of incorporating mindfulness meditation practice into higher education curriculum. The results indicated that students who participated in the brief MBSR program showed an increase in mindfulness, self-compassion, and psychological health, but no significant increase in distress (i.e. anxiety) (Bergen-Cico, Possemato, & Cheon, 2013). These results suggest that more extended periods of MBSR may be necessary for decreasing severe psychological distress. Mindfulness based training can facilitate awareness and attention which is important in learning new information and regulating emotional responses. These skills can help improve a person's social development, academic performance, and emotion regulating behaviors important for personal development in college students (Shapiro, Brown, & Astin, 2008). Research has suggested that incorporating mindfulness practice into higher education systems has positive benefits for students and could be more convenient considering most students do not seek guidance for distress.

Evidence supports the idea that mindfulness facilitates positive emotions and enables people to be more open-minded and aware of their environment. Therefore, an

important idea to consider is the effects of mindfulness in facilitating coping-related hopefulness. Because mindfulness is related to openness and acceptance of new experiences, it could possibly be related to approach coping instead of avoidance coping (Sears & Kraus, 2009). The openness and acceptance that one experiences during mindfulness could allow one to identify solutions to problems more effectively and generate appropriate agency and pathways toward achieving goals (Sears & Kraus, 2009).

A study conducted by Sears & Kraus (2009) analyzed the effects of mindfulness meditation on anxiety, positive and negative affect, and hope in a group of college students. Cognitive distortions and coping styles were also investigated. The study consisted of four conditions including a control group who received no meditation. The first group participated in a brief weekly meditation that focused on attentional aspects of mindfulness. The second group participated in a brief weekly meditation that focused on loving kindness aspects of mindfulness. Lastly, the third group participated in a longer weekly meditation that focused on attentional and loving kindness aspects of mindfulness combined (Sears & Kraus, 2009). The participants also filled out several measures including: Beck Anxiety Inventory, Positive and Negative Affect Scale, Coping Style, and the Snyder State Hope Scale. The study concluded that longer meditation practice resulted in increased hope, reduced anxiety, and reduced negative affect over the semester (Sears & Kraus, 2009). Interestingly, the weekly longer meditation group that engaged in both attentional and loving kindness mindfulness meditation showed decreases in anxiety and negative affect and increases in hope (Sears & Kraus, 2009). This study is important because it proves that mindfulness meditation can lead to

reductions in anxiety and negative affect and increases in positive affect and hope in college students (Sears & Kraus, 2009).

The current study will examine how the positive emotion of "hope", specifically coping-related hopefulness in college students, is affected by mindfulness meditation. It is hypothesized that a brief mindfulness meditation given to a group of college students will increase coping-related hopefulness compared to a group who completes a mind-wandering activity. The goal of the current study is to determine if mindfulness meditation will decrease stress related to a current stressor and increase hopefulness related to coping with that stressor.

Chapter II: Method

Participants

Approval for the current study was obtained from the Institutional Review Board of the University of Southern Mississippi (see Appendix A for approval letter). Data were collected from 43 students, recruited from the University of Southern Mississippi. Students were offered course credit through the SONA research system for their participation. Of the 43 participants that completed the study, 19% were male and 81% were female. Participants' ethnic backgrounds were diverse revealing that the majority of participants were Caucasian (61%), 33% were African-American, 2.3% were Asian-American, 2.3% were Latino (Non-Hispanic), and 2.3% were Multi-Racial. Ages of the participants ranged from 17 to 48, with a mean age of 22.09 (SD = 7.773). 30% were Freshmen, 16% were Sophomores, 30% were Juniors, and 23% were seniors at the

University of Southern Mississippi. 30% of the participants were Psychology majors, while 70% were of a different major.

Measures

College Chronic Life Stress Survey (CCLSS; Towbes & Cohen, 1996*)*. The College Chronic Life Stress Survey is a checklist of potentially stressful life events that are relevant to college students (e.g., roommate conflict, balancing schoolwork and work). The CCLSS consists of 48 items rated on a 3-point Likert (Bothered me a little-Bothered me a lot). Only items that had been bothering the participant for the last month were given a rating. The authors present good evidence for reliability and validity of the scale (Towbes & Cohen, 1996). Specifically, the authors reported good test-retest reliability and concurrent validity, as well as predictive validity in terms of its correlation with psychological distress (Towbes & Cohen, 1996). Scores on this measure were not used in analyses for the current study. Rather, the measure was used to orient participants to a current stressor in their life to focus on when responding to the Snyder State Hope Scale.

Demographic Questionnaire. A brief demographic questionnaire was administered to obtain information about participants, including age, sex, ethnicity, academic status, and academic major.

*Snyder State Hope Scale (*SSHS; C.R. Snyder, et, al.. 1996*)*. The State Hope Scale is a self-report measure consisting of 6 items that are rated on an 8-point Likert (1 = Definitely False, 8 = Definitely True). Total scores were calculated by summing the responses to each question. Research shows that the Snyder State Hope Scale exhibits

good reliability and validity (Rand & Cheavens, 2009). The SSHS was administered to assess the level of hopefulness participants felt in reference to their indicated current stressor. This scale was given before and after the 10-minute intervention exercise to compare increases or decreases in hopefulness.

Procedures

All undergraduates participating in this study were required to visit an on-campus lab at a scheduled appointment time. Participants received an oral explanation of the study procedures, confidentiality, course credit, and potential risks and benefits of the current study as part of the informed consent process. Participants then signed and dated a consent form indicating their willingness to participate in the study. After providing consent, participants completed the College Chronic Life Stress Survey to determine the nature and severity of stressors that were currently bothering them. They were then asked to indicate the one event they felt was the current and greatest cause of stress in their life. Following this, participants completed the Snyder State Hope Scale to indicate how hopeful they felt in relation to their current stressor. Next, participants completed a demographic questionnaire. After this, they engaged in a 9-10 minute intervention depending on their previously, randomly assigned group condition. The mindfulness meditation group received a pre-recorded audio mindfulness meditation from Harris (2013), obtained from the following website: https://www.youtube.com/watch?v=pzMhLmErz5Q. The mind-wandering group was instructed to sit back in a comfortable position and think of anything that came to mind. The test administrator explained the directions to the participants then left the room during the intervention. Upon completion of the interventions, both groups completed the

Snyder State Hope Scale again with their current stressor in mind. Participants were asked if they had any further questions and thanked for their participation.

Chapter III: Results

The hypothesis for the current study was that the mindfulness meditation group would have greater increases in hope after the intervention compared to the mind-wandering group. First, the total scores for the Snyder Hope Scale were computed for both groups (mindfulness and mind-wandering) before and after the intervention. Next, the difference between Hope Scale 2 (post-intervention) and Hope Scale 1 (pre-intervention) was computed. Results indicated that the overall mean change in hope was 3.9 (*SD*=3.81). The mean differences in hope change across the mindfulness and mind-wandering groups were compared using an independent samples t-test (two-tailed). Results indicated the average hope increase for the mindfulness meditation group was 2.8 (*SD*=3.74), and the average hope increase for the mind-wandering group was 2.2 (SD=3.46). (See Figure 1). The t-test indicated that the results were not statistically significant, $t(8) = 0.90$, $p=.393$. Thus, the differences are in the hypothesized direction, but with the current sample size, it cannot be determined whether this result may have been due to chance.

Next, the overall mean stress score for both groups was 48.8 (SD=27.26). The existing data was then analyzed again by separating participants into two groups depending on their level of stress indicated by the CCLSS. The high stress group contained stress scores above the overall mean, and the moderate stress group contained stress scores below the mean. Again, the difference between Hope Scale2 (post-intervention) and Hope Scale 1 (pre-intervention) was computed for the high stress group and the moderate

stress group. Within the low stress group, the average increase in hope for the mindfulness group was 2.08 (SD=4.01), and the average increase for the mind-wandering group was 2.0 (SD=3.42). Within the high stress group, the average hope increase for the mindfulness group was 3.7 (SD=3.37), and the average hope increase for the mind-wandering group was 2.4 (SD=3.63). The t-test indicated that the results were not statistically significant. However, the high stress group showed a greater increase in hope in the mind-wandering group.

Chapter IV: Discussion

Although not statistically significant, the results of the current study indicated that the mindfulness meditation intervention showed an increase in positive thoughts about coping with stressors (i.e., state hopefulness) in college students' lives relative to the mind-wandering intervention. This is evident in the total score increase for both groups, with mindfulness having a greater increase in scores. The results also suggest that the mindfulness intervention could potentially facilitate greater increases in hope when a person is under higher levels of stress. This is evident in the hope score increases between the mindfulness group and the mind-wandering group within the high stress group. There is a clear trend for mindfulness having greater influences on positive thinking than mind-wandering.

There were several limitations to the current study that should be noted. First of all, the sample size and population could not be generalized to other populations. The sample only consisted of college students, therefore it cannot be generalized to other more diverse populations with different causes of stress. Although the effects of mindfulness seem to be beneficial and buffer the negative effects of stress in college

student populations, it could potentially be just as beneficial in other populations with different levels and causes of stress. Next, the length of the mindfulness intervention is a possible limitation. It is possible that the mindfulness intervention could have facilitated present moment positive emotions other than long-term coping-related hopefulness. Research using mindfulness-based stress reduction programs has suggested that incorporating longer mindfulness meditation programs into schools could have more long-term benefits. Lastly, participant incentive was a major limitation in this study. Although participants received class credit for their participation, some participants followed directions and actively participated while others did not seem to take the procedure as seriously. Thus, for a future study, it would be useful to recruit a sample of participants with more of an incentive to actively participate and put forth effort in the intervention, in order to more accurately gauge the effects of mindfulness on coping-related hopefulness. One option would be to pay participants for their time, and another option would be to recruit participants who want to learn coping strategies, so that that there would be some intrinsic motivation to actively engage.

As discussed previously, the results indicate that continuing the current study with a large and more diverse sample would be worth pursuing. Although the current study had a small limited sample size and was found to be statistically insignificant, the data indicated that there could possibly be a promising increase in the mindfulness meditation condition compared to the mind-wandering condition. Although both groups showed an increase, the Snyder State Hope Scale scores consistently increased more in the mindfulness group than in the mind-wandering group. The second analysis between the high stress group and the low stress group indicated that people higher in stress could

potentially have higher increases in hope after the mindfulness intervention than people lower in stress. This could be due to the fact that people lower in stress do not find hope to be relevant in their situation. If the group differences observed in the current study still hold with a larger sample size, then the difference would likely be statistically significant. Therefore, the current study indicates that continuing to collect data with more subjects may be promising. Over time, the sample size will increase and more data will be collected and analyzed to determine if the increasing effect is maintained and found to be statistically significant. If future results with a larger sample and higher levels of stress still demonstrate a similar effect size, then the results will likely be statistically significant. In this case, a more definite conclusion can be drawn inferring that mindfulness meditation increases coping-related hopefulness in the college student population and gives them an effective option for managing stress.

Future studies on the effects of mindfulness could consider a longer mindfulness intervention. The results could be compared to the results of more short-term mindfulness interventions. Also, future research could measure the causes of stress, individual coping styles, and positive emotional states other than hope. It may be that mindfulness interventions have a positive impact on other variables relevant to coping other than hopefulness, as hope is just one of many variables that could have an influence on adaptive responses to coping. Because the results of the current study show greater hope increases for people with higher levels of stress, another important implication would consider screening a larger number of participants for their level of stress and only using those with higher levels of stress. If the current results display a clear trend in increased

hopefulness for students with higher levels of stress, a larger sample size consisting of high levels of stress could potentially yield statistically significant results.

The purpose of this research was to find more effective ways for college students to cope effectively with on-going stressors that could otherwise have negative impacts in every aspect of their lives. The goal of this research was to see if a short mindfulness intervention would increase hope related to coping with stress. The results indicated that for both groups combined, the mindfulness group showed greater increases in coping-related hopefulness. Within the high stress group and low stress group analysis, the greatest increase in hope for the mindfulness group was within the high stress group. This suggests that people with higher levels of stress could potentially be better suited for this type of mindfulness intervention compared to people lower in hope that may not perceive their level of hope as relevant to their situation. This research suggests that brief mindfulness practice could potentially increase college students' hope related to coping with high levels of stress.

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Appendices

Appendix A

Table 1: Endorsement of "most stressful" event on the CCLSS

CCLSS Item	# Endorsed	Percent
1. Ongoing conflict or problems getting along with roommate	0	0%
2. Being homesick/missing family members	2	4.7%
3. Ongoing conflict or problem getting along with a friend	0	0%
4. Having papers or essays to write	1	2.3%
5. Trying to stay on a diet to lose weight	3	7.0%
6. Not having enough money for extras such as social activities	1	2.3%
7. Having a long distance relationship with your boyfriend/girlfriend/lover	1	2.3%
8. Having to juggle school and a job	6	14.0%
9. Having to put a lot of time into extracurricular activities (practicing a sport, sorority/fraternity)	0	0%
10. Dorm life is too loud or noisy	1	2.3%
11. Not having a car	1	2.3%
12. Being underweight	0	0%
13. Trying to decide what to major in	1	2.3%
14. Missing friends who live far away	1	2.3%
15. Doing poorly in one or more of your classes	1	2.3%
16. Car troubles or problems related to commuting to school	0	0%
17. Ongoing illness or disability of a family member	2	4.7%
18. Not having a boyfriend/girlfriend/lover or someone to date	1	2.3%
19. Having a lot of pressure at your job	0	0%
20. Not having enough privacy	0	0%
21. Not having enough sex	0	0%
22. A close friend has personal problems	0	0%
23. Being behind on your schoolwork on a regular basis	0	0%
24. Not liking your appearance (e.g., unhappy with height or facial features. Not your weight)	0	0%
25. Adjusting to new living conditions	1	2.3%
26. Ongoing conflict or problems getting along with boyfriend/girlfriend/lover	0	0%
27. Pressure from your parents (e.g., about grades, your major, dating relationships, etc.)	1	2.3%
28. Not having or making many friends	0	0%
29. Having problems managing your time effectively (e.g., not having enough time to get things done, procrastinating, not having time for yourself, etc.)	2	4.7%
30. Studying	2	4.7%
31. Not getting enough exercise or not being physically fit	0	0%
32. Ongoing conflict or problems getting along with parent(s)	0	0%

33. Being concerned about your academic performance (e.g., worried about doing poorly on tests, papers, assignments, etc.)	3	7.0%
34. Poor performance on your job (e.g. not making sales, being late, etc.)	0	0%
35. Being overweight	1	2.3%
36. Being concerned about the degree of sexual intimacy with a partner	0	0%
37. Feeling like you do not fit in socially (e.g., being left out of important social activities, not being popular, etc.)	0	0%
38. Missing a lot of classes	0	0%
39. Being concerned about your alcohol or drug use	0	0%
40. Having an overload of schoolwork (e.g., having a lot of tests or assignments due in a short period of time, having a lot of reading, etc.)	1	2.3%
41. Conflicts with people in your dorm (other than your roommate)	0	0%
42. Parent/s having problems (e.g., parents having personal, financial, or alcohol problems or parents having ongoing conflict with each other, etc.)	2	4.7%
43. Not having enough money for tuition or important bills	2	4.7%
44. Being concerned about your performance in an extracurricular activity or sport	0	0%
45. Ongoing conflict or concerns about ex-boyfriend/ex-girlfriend/ex-lover	2	4.7%
46. Studying hard but still doing poorly or not understanding the material	0	0%
47. Being physically sick	1	2.3%
48. Ongoing conflict or problem getting along with brother or sister	0	0%
49. Not knowing where you will be living next semester	0	0%
50. Not having enough time to spend with your boyfriend/girlfriend/lover	0	0%
51. Taking a difficult class or one in which you do not understand the material	0	0%
52. Gaining weight or overeating	2	4.7%
53. Being unsure of your career or job future	1	2.3%
54. Not getting enough sleep	3	7.0%

Appendix B

Change in State Hope by Condition Figures

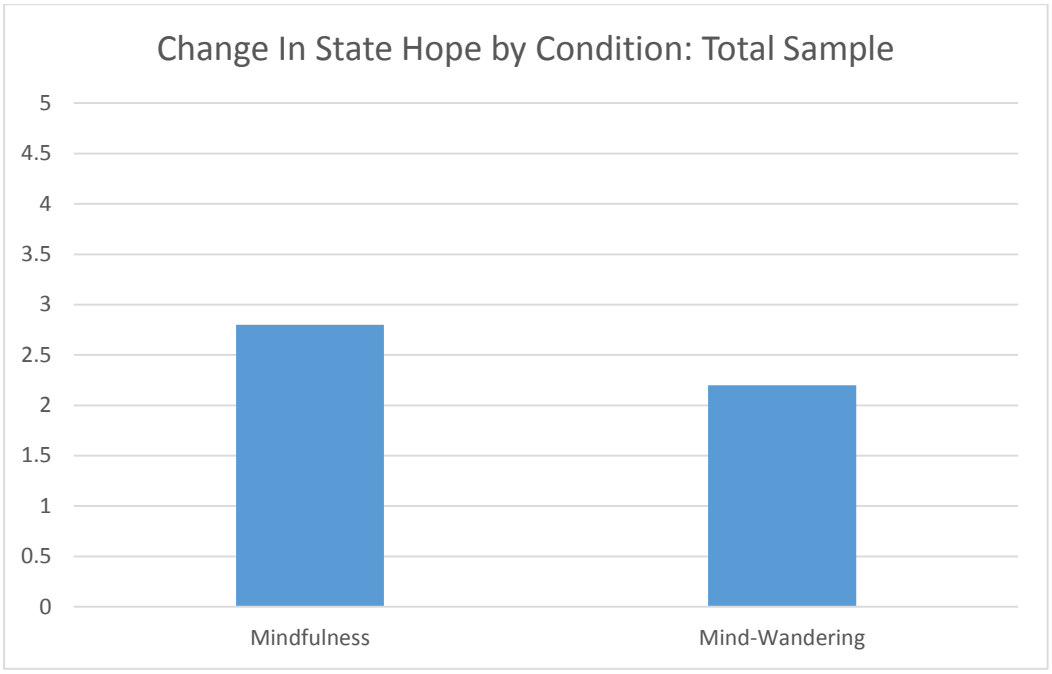

Figure 1. Change in State Hope by Condition: Total Sample

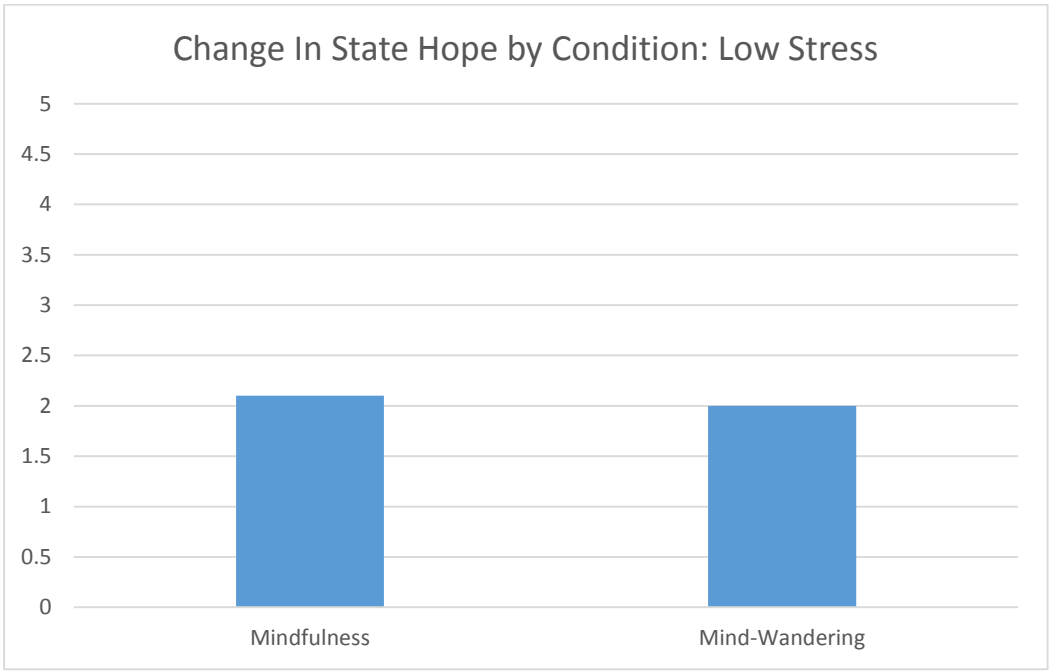

Figure 2: Change in State Hope by Condition: Low Stress

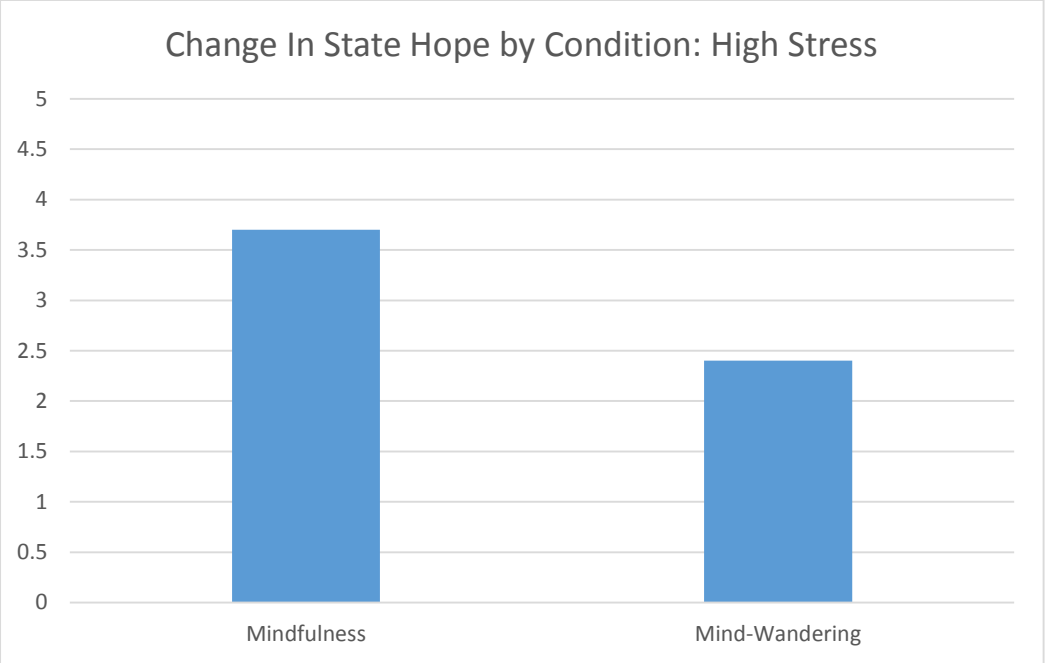

Figure 3: Change in State Hope by Condition: High Stress

Appendix C

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 15061805
PROJECT TITLE: Attention, Emotions, and Coping
PROJECT TYPE: New Project
RESEARCHER(S): Shelby Green
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 06/19/2015 to 06/18/2016
Lawrence A. Hosman, Ph.D.
Institutional Review Board

Appendix D

ORI | Office *of* Research Integrity

INSTITUTIONAL REVIEW BOARD
LONG FORM CONSENT

LONG FORM CONSENT PROCEDURES
This completed document must be signed by each consenting research participant. • The Project Information and Research Description sections of this form should be completed by the Principal Investigator before submitting this form for IRB approval. • Signed copies of the long form consent should be provided to all participants. Last Edited August 28th, 2014

Today's date:June 17, 2015		
PROJECT INFORMATION		
Project Title: Attention, Emotions, and Coping		
Principal Investigator: Dr. Randy Arnau	Phone: 601-266-5092	Email: randolph.arnau@usm.edu
College: Education & Psychology	Department: Psychology	

RESEARCH DESCRIPTION

1. **Purpose**:

The purpose of this study is to investigate the effect of different emotional states on stress and thoughts about coping with stress. The results of this study will add to the knowledge of how people's emotional experiences can effect the ways they deal with stress. Hopefully, such knowledge will eventually help psychologists develop better interventions to help people deal with stress.

2. **Description of Study:**

Participation in this study will take approximately 25-30 minutes of your time. Approximately 40-50 USM students will participate in this study. During this study, you will be asked to complete questionnaires related to your background (e.g., gender, ethnicity), current stressors in your life, normal personality traits, and current emotions and thoughts related to coping with a current problem or stressor in your life. Depending on the group to which you are randomly assigned, you will listen to an audio recording that will either (a) guide you in focusing your attention to your own breathing, thoughts, and bodily sensations or (b) instruct you to allow your mind to wander. After watching the video, you will complete another short questionnaire about your thoughts related to coping with a current stressor or problem in your life.

3. **Benefits:**

By participating in this study, you will earn 1 ½ SONA research credits, which will either count towards your required research credit, or extra credit, as specified by your instructor. There are no other tangible benefits or compensation for participating in this study. Upon completion of the study, your SONA credits will be added electronically to your SONA account within 2 business days, or prior to SONA closing for the semester, whichever is sooner.

4. **Risks:**

There are no known risks associated with the procedures of this study. There is a small chance that some people may also experience distress related to completing the stressful events checklist, which asks you to indicate how distressing recent stressful events or problems are for you currently. However, if there are any questions you do not feel comfortable answering, you are free to skip those questions, without losing any

experimental credit. If you become so uncomfortable that you decide to withdraw from the study, you may do so at any time, and still receive credit for the time you have spent in the study. If you would like to speak to a counselor about any stressful events or situations you are in, you can obtain free or low-cost psychological counseling either through the USM Student Counseling Center (266-4829), the Community Counseling & Assessment Clinic (266-4601), or the USM Psychology Clinic (266-4588).

5. **Confidentiality:**

All responses to questionnaires and data from this study will be anonymous. This means that neither your name, nor any other identifying information, will be connected with your questionnaire responses or any other study data.

6. **Alternative Procedures:**

Participation in this study is completely voluntary, and you may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Dr. Randy Arnau, at 266-5092, or by email at Randolph.Arnau@usm.edu.

7. **Participant's Assurance:**

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

CONSENT TO PARTICIPATE IN RESEARCH

Participant's Name: _____

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

_____ _____

Research Participant **Person Explaining the Study**

Appendix D

Measures

Demographic Information

Please answer the following questions about your background.

1. **Age**: _____

2. **Sex:** MALE / FEMALE

3. **Ethnicity (Please circle one)**:

CAUCASIAN AFRICAN-AMERICAN HISPANIC

ASIAN-AMERICAN LATINO (NON-HISPANIC) NATIVE-AMERICAN

PACIFIC ISLANDER MULTI-RACIAL (SPECIFY)_____

OTHER (SPECIFY)_____

4. **Year in College (circle one)**:

FRESHMAN SOPHOMORE JUNIOR SENIOR

5. **Are you a Psychology Major**? YES / NO

Snyder State Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes how you think about yourself right now, **specifically thinking about the stressful event/situation you just indicated as the most stressful for you,** and put that number in the blank before each sentence. Please take a few moments to focus on yourself and the stressful event/situation you just circles as the most stressful for you right now. Once you have this "here and now" set, go ahead and answer each item according to the following scale:

1=Definitely	2=Mostly	3=Somewhat	4=Slightly	5=Slightly	6=Somewhat	7=Mostly	8=Definitely
False	False	False	False	True	True	True	True

_____ 1. If I should find myself in a jam, I could think of many ways to get out of it.

_____ 2. At the present time, I am energetically pursuing my goals.

_____ 3. There are lots of ways around any problem that I am facing now.

_____ 4. Right now, I see myself as being pretty successful.

_____ 5. I can think of many ways to reach my current goals.

_____ 6. At this time, I am meeting the goals that I have set for myself.

College Chronic Life Stress Survey (CCLSS)

Below is a list of things that happen to college students that make them feel stressed, upset, or worried. For each thing you have experienced that has made you feel stressed, upset, or worried at least 2 or 3 times a week for the last month, indicate how much that thing BOTHERED YOU, using the choices to the right of the item. Remember to only rate those things that made you feel stressed, upset, or worried at least 2 or 3 times a week for the last month.

	BOTHERED ME		
	Just a Little	Moderate Amount	Very Much
1. Ongoing conflict or problems getting along with a roommate.	_____	_____	_____
2. Being homesick/missing family members.	_____	_____	_____
3. Ongoing conflict or problem getting along with a friend.	_____	_____	_____
4. Having papers or essays to write.	_____	_____	_____
5. Trying to stay on a diet to lose weight.	_____	_____	_____
6. Not having enough money for extras such as social activities.	_____	_____	_____
7. Having a long distance relationship with your boyfriend/girlfriend/lover.	_____	_____	_____
8. Having to juggle school and a job.	_____	_____	_____
9. Having to put a lot of time into extracurricular activities (practicing a sport, sorority/fraternity).	_____	_____	_____
10. Dorm life is loud or noisy.	_____	_____	_____
11. Not having a car.	_____	_____	_____
12. Being underweight.	_____	_____	_____
13. Trying to decide what to major in.	_____	_____	_____
14. Missing friends who live far away.	_____	_____	_____
15. Doing poorly in one or more of your classes.	_____	_____	_____

16. Car troubles or problems related to commuting to school.	_____	_____	_____
17. Ongoing illness or disability of a family member.	_____	_____	_____
18. Not having a boyfriend/girlfriend/lover or someone to date.	_____	_____	_____
19. Having a lot of pressure at your job.	_____	_____	_____
20. Not having enough privacy.	_____	_____	_____
21. Not having enough sex.	_____	_____	_____
22. A close friend has personal problems.	_____	_____	_____
23. Being behind in your schoolwork on a regular basis.	_____	_____	_____
24. Not liking your appearance (e.g., unhappy with height or facial features. Not your weight.).	_____	_____	_____
25. Adjusting to new living conditions.	_____	_____	_____
26. Ongoing conflict or problems getting along with your boyfriend/girlfriend/lover.	_____	_____	_____
27. Pressure from your parents (e.g., about grades, your major, dating relationships, etc.).	_____	_____	_____
28. Not having or making many friends.	_____	_____	_____
29. Having problems managing your time effectively (e.g., not having enough time to get things done, procrastinating, not having time for yourself, etc.).	_____	_____	_____
30. Studying.	_____	_____	_____
31. Not getting enough exercise or not being physically fit.	_____	_____	_____
32. Ongoing conflict or problems getting along with your parent(s).	_____	_____	_____

33. Being concerned about your academic performance (e.g., worried about doing poorly on tests, papers, assignments, etc.).	_____	_____	_____
34. Poor performance on your job (e.g., not making sales, being late, etc.).	_____	_____	_____
35. Being overweight.	_____	_____	_____
36. Being concerned about the degree of sexual intimacy with a partner.	_____	_____	_____
37. Feeling like you don't fit in socially (e.g., being left out of important social activities, not being popular, etc.).	_____	_____	_____
38. Missing a lot of classes.	_____	_____	_____
39. Being concerned about your alcohol or drug use.	_____	_____	_____
40. Having an overload of schoolwork (e.g., having a lot of tests or assignments due in a short period of time, having a lot of reading, etc.).	_____	_____	_____
41. Conflicts with people in your dorm (other than your roommate).	_____	_____	_____
42. Parent/s having problems (e.g., parent having personal, financial, or alcohol problem, or parents having ongoing conflict with each other, etc.).	_____	_____	_____
43. Not having enough money for tuition or important bills.	_____	_____	_____
44. Being concerned about your performance in an extracurricular activity or sport.	_____	_____	_____
45. Ongoing conflict or concerns about ex-boyfriend/ex-girlfriend/ex-lover.	_____	_____	_____
46. Studying hard but still doing poorly or not understanding the material.	_____	_____	_____
47. Being physically sick.	_____	_____	_____

48. Ongoing conflict or problem getting along with a brother or sister.	_____	_____	_____
49. Not knowing where you will be living next semester.	_____	_____	_____
50. Not having enough time to spend with your boyfriend/girlfriend/lover.	_____	_____	_____
51. Taking a difficult class or one in which you don't understand the material.	_____	_____	_____
52. Gaining weight or overeating.	_____	_____	_____
53. Being unsure of your career or job future.	_____	_____	_____
54. Not getting enough sleep.	_____	_____	_____